

Title (en)

Method of preparing a carbon nanosphere having at least one opening, impregnated catalyst comprising the carbon nanosphere and fuel cell using this catalyst

Title (de)

Verfahren zur Herstellung von Kohlenstoffnanokugel mit mindestens einer Öffnung, imprägnierter Katalysator mit Kohlenstoffnanokugeln und Brennstoffzelle unter Verwendung des Katalysators

Title (fr)

Procédé de préparation d'une nanosphere de carbone avec au moins une ouverture, catalyseur imprégné comprenant cette nanosphere de carbone et pile à combustible utilisant ce catalyseur

Publication

EP 1655266 A1 20060510 (EN)

Application

EP 05256467 A 20051018

Priority

KR 20040088218 A 20041102

Abstract (en)

Provided are a carbon nanosphere having at least one opening, a method of preparing the same, a carbon nanosphere- supported catalyst using the carbon nanosphere having at least one opening, and a fuel cell using the carbon nanosphere- supported catalyst. The carbon nanosphere having at least one opening is obtained by preparing a carbon nanosphere and treating it with an acid so as to form the opening. The carbon nanosphere having at least one opening has higher utilization of a surface area and electrical conductivity and lower mass transfer resistance than a conventional carbon nanotube, thus allowing for higher current density and cell voltage with a smaller amount of metal catalyst per unit area of a fuel cell electrode. Further, in the method of preparing the carbon nanosphere having at least one opening, the carbon nanosphere having at least one opening can be obtained in a simple and efficient manner.

IPC 8 full level

C01B 31/02 (2006.01); **B01J 21/18** (2006.01); **B01J 23/42** (2006.01); **B01J 35/00** (2006.01); **B82Y 30/00** (2011.01); **H01M 4/92** (2006.01); **H01M 8/10** (2006.01)

CPC (source: EP KR US)

B01J 21/18 (2013.01 - EP KR US); **B82B 3/0009** (2013.01 - KR); **B82Y 30/00** (2013.01 - EP US); **C01B 32/05** (2017.07 - EP KR US); **H01M 4/92** (2013.01 - EP KR US); **H01M 4/921** (2013.01 - KR); **H01M 4/926** (2013.01 - EP KR US); **B82Y 30/00** (2013.01 - KR); **H01M 4/921** (2013.01 - EP US); **H01M 2008/1095** (2013.01 - EP KR US); **Y02E 60/50** (2013.01 - EP KR); **Y10S 977/734** (2013.01 - EP KR US); **Y10S 977/737** (2013.01 - EP US); **Y10S 977/843** (2013.01 - EP US); **Y10S 977/847** (2013.01 - EP US); **Y10S 977/888** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1655266 A1 20060510; **EP 1655266 B1 20130925**; CN 1781843 A 20060607; CN 1781843 B 20100609; JP 2006131494 A 20060525; JP 4077838 B2 20080423; KR 100730119 B1 20070619; KR 20060039148 A 20060508; US 2006239890 A1 20061026; US 2011039184 A1 20110217; US 2012208103 A1 20120816; US 7837968 B2 20101123; US 8173096 B2 20120508; US 8603934 B2 20131210

DOCDB simple family (application)

EP 05256467 A 20051018; CN 200510118507 A 20051027; JP 2005313391 A 20051027; KR 20040088218 A 20041102; US 201213443599 A 20120410; US 26281205 A 20051101; US 91135210 A 20101025